

V. REMARKS

The Office Action objects to claim 7 because it contains the trademark, Tempax®. The claim is amended to obviate the objection. Withdrawal of the objection is respectfully requested.

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by Hodges (U.S. Patent No. 5,590,787). The rejection is respectfully traversed.

Claim 1 is amended to include the following steps:

(a) a step of placing a regulating member as spaced downward from the work piece held by the adhesive tape prior to emitting ultraviolet light;

(b) a step of supporting, with said regulating member, an undersurface of the work piece held by the frame when the adhesive tape softens under influence of heat in the step of emitting ultraviolet light and slackening under weight of the work piece.

The feature of the present invention "a regulating member as spaced downward from the work piece" is not disclosed in or suggested by the applied art.

In the applied art, as shown in Figs. 2 and 3, the flat central portion 11 of each bed structure 10 is formed of a hard transparent material such as glass, an ultraviolet sensitive adhesive 15 is formed on the upper surface of that portion, and a work piece (die) 14 is fixedly placed thereon. A plurality of work pieces 14 individually held by separate bed structures 10 are stored in multiple stages in a die pack shown in Fig. 4, and transported to a destination (next step). The work pieces in that state are irradiated at the back surfaces thereof with ultraviolet light. Subsequently, the dies are separated from the adhesive.

Thus, in the applied art, each work piece is held by a hard member penetrable by ultraviolet light, and not by a material that softens and deforms under the influence of heat as in the present invention. In the applied art, therefore, the holding member will not undergo heat deformation to slacken under the weight of the work piece in time of emitting ultraviolet light.

On the other hand, the present invention holds the work piece with an ultraviolet sensitive adhesive tape that undergoes heat deformation, and even

when the adhesive tape softens under the influence of heat in time of ultraviolet irradiation, the regulating member limits a downward displacement the slack adhesive tape.

It is respectfully submitted that the rejection is improper because the applied art fails to teach each element of claim 1 as amended and discussed above. In particular, as noted above, the present invention is different in construction from the applied art. As a result, it is respectfully submitted that claim 1 is allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

Claims 2-6, 9, 12, 13 and 15 are rejected under 35 U.S.C. 103(a) as unpatentable over Hodges in view of Farnworth et al. (U.S. Patent No. 6,202,292). The rejection is respectfully traversed. The rejection is respectfully traversed.

Farnworth discloses a system for releasing at least a portion of a carrier film from at least one selected semiconductor die and includes a base, a vacuum source and a die pick up mechanism. The base includes a plate member configured to be moved laterally within a periphery of a frame supporting the carrier film having a semiconductor wafer adhered thereto. The plate member includes a plurality of supports disposed within the periphery, positioned below the carrier film and sufficiently mutually laterally spaced to permit deflection of portions of the carrier film therebetween responsive to a pressure differential across the carrier film. The vacuum source is operatively connected with the base to create a vacuum between the plurality of supports. The die pick up mechanism is laterally positioned proximate to the plate member in a plurality of locations on an opposite side of the carrier film from the plurality of supports.

Claim 4, as amended, is directed to an ultraviolet irradiating apparatus for emitting ultraviolet light toward a work piece and a ring-shaped frame holding the work piece through an ultraviolet sensitive adhesive tape applied to a back surface of the work piece. Claim 4 recites that the apparatus includes regulating means disposed at a predetermined distance from a back surface of the adhesive tape for limiting a downward

displacement of the work piece held by the ring-shaped frame when emitting ultraviolet light toward the work piece.

It is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests the features of claim 4 as amended and noted immediately above. Thus, it is respectfully submitted that one of ordinary skill in the art would not be motivated to combine the features of the applied art because such combination would not result in the claimed invention particularly in light that the present invention is different in construction from each of the references. As a result, it is respectfully submitted that claim 4 is allowable over the applied art.

Claims 2 and 3 depend from claim 1 and include all of the features of claim 1. Claims 6, 9, 12, 13 and 15 depend from claim 4 and include all of the features of claim 4. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason the independent claims are allowable as well as for the features they recite.

Withdrawal of the rejection is respectfully requested.

Claims 7, 8 and 10-12 are rejected under 35 U.S.C. 103(a) as unpatentable over Hodges in view of Farnworth and further in view of Summersgill et al. (U.S. Patent No. 6,348,999). The rejection is respectfully traversed.

Summersgill discloses a micro relief element which includes a first layer of a first substrate, an overlay and at least one relief feature. The first layer has a receptive surface capable of retaining a relief forming polymer. The overlay has a desired thickness of the relief forming polymer over the receptive surface. The at least one relief feature is formed from the relief forming polymer and which protrudes above the overlay.

Claims 7, 8 and 10-12 depend from claim 1 and include all of the features of claim 4. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 4 is allowable as well as for the features they recite.

Withdrawal of the rejection is respectfully requested.

Claim 14 is rejected under 35 U.S.C. 103(a) as unpatentable over Hodges in view of Farnworth and further in view of Okamoto et al. (U.S. Patent No. 6,153,357). The rejection is respectfully traversed.

Okamoto teaches a process for fabricating semiconductor integrated circuit devices.

Claim 14 depends from claim 4 and includes all of the features of claim 1. Thus, it is respectfully submitted that claim 14 is allowable at least for the reason claim 4 is allowable as well as for the features it recites.

Withdrawal of the rejection is respectfully requested.

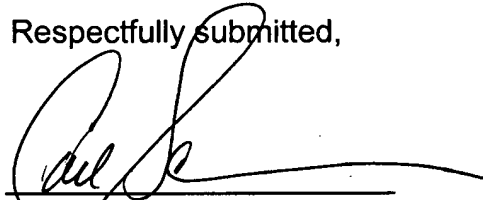
In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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Enclosure(s): Amendment Transmittal

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